



# Eye-catching graphics with all the right curves!

## Film Insert Molding

What does a surgeon performing an operation have in common with a cashier scanning merchandise? The performance of their job can be inhibited by instruments with worn, peeling or missing labels. When product graphics are essential to usability, you need them to last for the life of the product. LGI International's Film Insert Molding (FIM) process integrates product labeling and decoration features into the product housing, ensuring that it will always be clear and legible.

## Next generation product identification

Film Insert Molding (FIM), also known as In Mold Decorating (IMD) is a new, highly advanced method of applying printed graphics to injection molded plastic parts. FIM can be used to apply clear scratch-resistant hardcoats, logos, text and graphics in any color or combination of colors to plastic parts prior to injection molding.

## In-house capabilities from design to assembly

LGI delivers value early on by working closely with your engineers to identify design decisions that will impact tooling and production investments. We evaluate the full scope of your requirements, including tooling, design, forming, molding, and product assembly of your parts. And, LGI is equipped to perform as your full-service provider—printing film, forming the printed film, and injection molding the formed part. Plus, we offer assistance with tool design and management.

## Improved design flexibility and quality

The FIM process used at LGI accommodates multiple graphic variations within a single molding run. This approach enables us to support versioning and personalization needs, including individually personalized parts, in the most cost effective manner.

Film Insert Molding is the right technology for the plastic parts of today. Pad printing, screen printing, and hot stamping all have their place, but in many cases are too limiting, too expensive and don't look as sharp or provide the durability of FIM parts.

## Product Highlights

- Graphics printed sub-surface for increased durability
- Graphics, lenses and hardcoats integrated directly into products
- Simplified product assembly and elimination of adhesives
- Maximized design flexibility
- Reduced inventory cost
- Enhanced cost control with design level implementation

## Useful Applications

- Handheld devices with data screens
- Product housings
- Irregular and curved surfaces



 **LGI International**  
Advancing the technology of labels

## The Film Insert Molding Process

### 1. Printing

The graphics are printed on special high temperature films. The inks used are designed to endure the injection molding environment.

### 2. Thermal Forming

The printed graphic is formed into a 3D shape and can be die cut. The "applique", as it is now called, is ready for placement in the mold. Flat appliques may be used also.

### 3. Injection Molding

The applique is placed in a mold cavity, plastic is injected behind it and the applique becomes integrated with the new plastic part.

### 4. The Finished Part

For many projects, the part is now completely decorated. Final assembly may take place. No more printing will be needed.

